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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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GEORGE J. MIAO

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2610

7590

02/22/2005

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EXAMINER

NGUYEN, DUNG X

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/467,611	<b>Applicant(s)</b> MIAO ET AL.	
	<b>Examiner</b> Dung X Nguyen	<b>Art Unit</b> 2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 18 and 20 - 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 - 18 and 20 - 30 is/are allowed.
- 6) ☒ Claim(s) 1 - 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. Applicant's arguments filed on September 29, 2004 have been fully considered. but are moot in view of the new ground(s) of rejection. Claim 19 has been canceled.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

3. **Claim 1 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Amano et al. (US patent # 5,136,577).

Regarding claim 1, Amano et al. discloses (figure 1 and abstract):

- Filter bank (201) and decimation (202) corresponding to a first digital decimation filter with N bands; and
- Filter bank (101) and decimation (102) corresponding to a second digital decimation filter to reject N-1 bands coupled to the first decimation filter; where  $N = 2$ .

Amano et al. differs from the instant claimed invention that it does not state that a second decimation filter for implementing a GSM communication mode.

However, from the preceding information, one of ordinary skill in the art is able to implement a GSM communication mode to the second decimator for a designed selection.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement Amano et al. as the requirements of the instant claimed invention for a designed choice.

4. **Claim 2 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Amano et al. (US patent # 5,136,577, in view of Shalvi et al. (US patent # 6,647,070 B1).

Regarding claim 2, as followed by the limitations analyzed in claim 1, Amano et al. differs from the instant claimed invention that it does not show the step of first decimation filter may selectively implement a digital square-root-raised-cosine filter for a W-CDMA mode.

However, Shalvi et al. discloses (figure 1) that a matched filter (110) corresponding to a first decimation filter may selectively a square-root-raised-cosine filter (column 6, lines 36 – 43). From the preceding information, one of ordinary skill in the art is able to implement the first decimation filter by the square-root-raised-cosine filter for a W-CDMA mode for a designed selection.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Amano et al. and Shalvi et al. as providing the requirements of the instant claimed invention for a designed choice.

5. **Claim 3 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Amano et al. (US patent # 5,136,577, Shalvi et al. (US patent # 6,647,070 B1 and further in view of Pearce (US patent # 5,341,135).

Regarding claim 3, as followed by the limitations analyzed in claim 2, Amano et al. and Shalvi et al. differ from the instant claimed invention that it does not show the step of the first and second decimation filters are programmable filters.

However, Pearce discloses (figure 4) that the decimation filter (25), the decimation filter (28), tap weight computation (17), and N tap FIR equaliser (14) corresponding to the first and second decimation filters are programmable filters (column 7, lines 32 – 49).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Amano et al., Shalvi et al., and Pearce as providing the requirements of the instant claimed invention for selection a designed choice.

***Allowable Subject Matter***

6. **Claims 4 – 15 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. **Claims 16 – 18 and 20 - 30 are allowed.** The following is a statement of reasons for the indication of allowable subject matter:

Regarding to the claimed invention, the prior art of record fails to show or render obvious of a method and its corresponding apparatus, comprising:

Providing a first filtering stage and a second filtering stage;

Selectively programming the first stage to filter a W-CDMA signal or a GSM communication signal;

Using the second stage to filter the GSM communication signal;

Detecting the type of signal that has been received;

Adapting the first and second stages to the type of detected signal; and

Selectively using the first and second stages based on the type of the detected signal.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jian et al., "An Efficient IF Architecture for Dual-Mode GSM/W-CDMA Receiver of a Software Radio", IEEE 1999 International Workshop on Mobile Multimedia Communications 1999, 15 – 17 November 1999, pp. 21 – 24.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 8:00 AM to 17:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour Mohammad H. can be reached on (571) 272-3021. The fax phone numbers for this group is (571) 273-3021.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

DXN

November 05, 2004

  
MOHAMMED GHAYOUR  
SUPERVISORY PATENT EXAMINER